



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.								
09/992,051	11/21/2001	Kevin M. Ferguson	7217 US	4466								
30078 7590 01/04/2007 MATTHEW D. RABDAU TEKTRONIX, INC. 14150 S.W. KARL BRAUN DRIVE P.O. BOX 500 (50-LAW) BEAVERTON, OR 97077-0001			<table border="1"><tr><td colspan="2">EXAMINER</td></tr><tr><td colspan="2">TRAN, TRANG U</td></tr><tr><td>ART UNIT</td><td>PAPER NUMBER</td></tr><tr><td>2622</td><td></td></tr></table>		EXAMINER		TRAN, TRANG U		ART UNIT	PAPER NUMBER	2622	
EXAMINER												
TRAN, TRANG U												
ART UNIT	PAPER NUMBER											
2622												
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE									
3 MONTHS		01/04/2007	PAPER									

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 09/992,051	Applicant(s) FERGUSON, KEVIN M.	
	Examiner Trang U. Tran	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 August 2006 and 22 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/29/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 22, 2006 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipate by Faroudja (US Patent No. 5,428,398).

In considering claim 1, Faroudja discloses all the claimed subject matter, note 1) the claimed an apparatus for providing a smooth interpolated video signal at any desired rate from a slower rate video signal (color television system of Figs. 1A-1B) means for up-sampling the slower rate video signal to the desired rate is met by the

Art Unit: 2622

motion-adaptive line doubler 106 which doubles any input formats (Figs. 1-2, col. 5, lines 25-65), and 2) the claimed means for adaptively filtering the up-sampled slower rate video signal using a human visual model to produce the smooth interpolated video signal is met by the non-linear enhancer 110 which substantial suppression of all visually annoying artifacts, achieves a viewer-perceived picture quality (human visual model) that is substantially better than would result if image enhancement and sharpening were not provided (Figs. 1A-1B, col. 3, lines 34-64 and col. 5, line 66 to col. 6, line 62).

Claim 3 is rejected for the same reason as discussed in claim 1.

Claim 5 is rejected for the same reason as discussed in claim 1.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Faroudja (US Patent No. 5,428,398) in view of Zhu et al. (US Patent No. 6,069,664).

In considering claim 2, Faroudja discloses all the limitations of the instant invention as discussed in claim 1 above, except for providing the claimed further comprising means for restoring a direct current level for the smooth interpolated video signal. Zhu et al teach that the PTI converter 10 and ITP converter 20 provide the

Art Unit: 2622

restoration of the full vertical resolution corresponding to a progressive video signal from a conventional interlaced video source produced by any progressive film scanner or other similar device where at least one of the horizontal scan lines have been repeated or replaced with a constant value (Fig. 1, col. 8, lines 20-56). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to incorporate the restoration of the full vertical resolution as taught by Zhu et al into Faroudja's system in order to preserve the vertical resolution of a progressive film scan system and maintains (NTSC) interlaced video signal output for backward compatibility with existing recording equipment and standard video interfaces in the broadcasting and consumer electronics industry.

Claim 4 is rejected for the same reason as discussed in claim 2.

Claim 6 is rejected for the same reason as discussed in claim 2.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang U. Tran whose telephone number is (571) 272-7358. The examiner can normally be reached on 8:00 AM - 5:30 PM, Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2622

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

December 26, 2006



Trang U. Tran
Primary Examiner
Art Unit 2622